



## Thirteen new species of Graphidaceae (lichenized Ascomycota: Ostropales) from Sri Lanka

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### Abstract

Based on further study of collections of Graphidaceae originating from Sri Lanka, thirteen new species are described: *Acanthothecis aurantiacodiscus* G. Weerakoon, Lücking & Lumbsch, differing from *A. socotrana* in the corticate thallus, larger and broader ascomata with orange disc, and larger ascospores; *Chapsa isidiata* G. Weerakoon, Lücking & Lumbsch, characterized by a yellowish, isidiate thallus; *Halegrapha masoniana* G. Weerakoon, Lücking & Lumbsch, differing from other species of *Halegrapha* in the combination of interspersed hymenium and norstictic acid chemistry, as well as the comparatively large ascospores; *Leucodecton canescens* G. Weerakoon, Lücking & Lumbsch, with grey thallus and rather large, black-rimmed ascoma pores; *L. fuscomarginatum* G. Weerakoon, Lücking & Lumbsch, differing from *L. coppinsii* in the immersed ascomata and larger ascospores; *Ocellularia aptrootiana* G. Weerakoon, Lücking & Lumbsch, differing from *O. pluriporoides* in the less prominent, regularly rounded ascomata with broad white rim, the brown (uncarbonized) columella, and the smaller ascospores; *O. balangoda* G. Weerakoon, Lücking & Lumbsch, differing from *O. mauritiana* in the more regular, apically carbonized columella; *O. cloonanii* G. Weerakoon, Lücking & Lumbsch, differing from *O. pluripora* in the ascomata with broader pore, the apically carbonized columella, and the larger ascospores; *O. raveniana* G. Weerakoon, Lücking & Lumbsch, differing from *O. laeviuscula* in the distinct columella and the hyaline, transversely septate ascospores; *Platythecium sripadakandense* G. Weerakoon, Lücking & Lumbsch, with pseudostromatic lirellae and norstictic acid chemistry; *Rhabdodiscus isidiatus* G. Weerakoon, Lücking & Lumbsch, characterized by a cream-white thallus with robust isidia and by small, 3-septate ascospores; *R. parmenianus* G. Weerakoon, Lücking & Lumbsch, with immersed, annulate ascomata and submuriform, hyaline ascospores; and *Thallolooma pedespulli* G. Weerakoon, Lücking & Lumbsch, differing from *T. haemographum* in the larger ascospores. The new combination *Leucodecton coppinsii* (Homchant.) G. Weerakoon, Lücking & Lumbsch is also proposed. The considerable diversity of Graphidaceae in Sri Lanka is placed into perspective given the destruction of most of the natural rain forest habitats typical for this family and many other organisms.

**Keywords:** biodiversity hotspot, lichens, new species, tropical diversity, Western Ghats

### Introduction

The island of Sri Lanka forms part of the Western Ghats-Sri Lanka biodiversity hotspot (Myers *et al.* 2000; Conservation International 2005). In spite of repeated connections between the island and the Indian subcontinent during geologically recent periods of low sea level (Rohling *et al.* 1998), the Sri Lankan biota is remarkably unique, with high levels of local endemism especially in rain forest areas (Cadle *et al.* 1990; Moritz *et al.* 1997; Meegaskumbura *et al.* 2002; Bossuyt *et al.* 2004). However, this biota is threatened by large-scale destruction of natural habitats over the past century (Legg & Jewell 1995; Nanayakkara 1996; Gunatilake 1998; Government of Sri Lanka 2000; Bandarattillake & Fernando 2003; FAO 2005, 2010; Suthakar & Bui, 2008). Presently, while about 15% of the island's area is under protection, as little as 1.5% correspond to natural, undisturbed vegetation (Conservation International 2005).

Fungi, including lichenized species, are among the least studied organisms in Sri Lanka. Although Sri Lanka has been the focus of various lichen studies, compared to its overall rich biodiversity, it remains understudied with regard to both macro- and microlichens (Weerakoon 2010). Apart from historic treatments leading up to the early

## Acknowledgements

This publication continues our world-wide and community-wide revision of the lichen family Graphidaceae in the frame of the NSF-funded project "ATM – Assembling a taxonomic monograph: The lichen family Graphidaceae" (DEB-1025861 to The Field Museum; PI T. Lumbsch, CoPI R. Lücking). GW would like to thank the Cloonan family for the donation of private collection from the family plant herbarium which contains various plant materials such as logs, roots leaves, dried flowers and fruits. The lichens were extracted from dried bark pieces and root parts which had been collected as ornaments.

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